

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for receiving input sequences entered by a user and generating a phrase comprising one or more ideographic characters as an output comprising the steps of:

(a) entering an input sequence into a user input device, wherein said user input device comprises:

a reduced keyboard input device having a plurality of input means, each being associated with at least one of a plurality of strokes and a plurality of phonetic characters, an input sequence being generated each time an input means is selected by a user, wherein the generated input sequence has an interpretation that is ambiguous due to the plurality of strokes or phonetic characters associated with each input means;

an input method specific database containing both a set of stroke sequences corresponding to input sequences and a set of phonetic sequences corresponding to input sequences;

an ideographic database comprising indices associated with both said set of stroke sequences and said set of phonetic sequences, said indices corresponding to:

a set of phonetic sequences whose spellings correspond to said input sequence, and

a set of stroke sequences corresponding to the input sequence,

wherein each of said set of phonetic sequences and said set of stroke sequences represent a phrase comprising two or more ideographic characters;

(b) comparing said input sequence with said input method specific database and finding one or more matching stroke or phonetic sequences corresponding to said input sequence;

(c) converting said matching stroke or phonetic sequences to one or more corresponding sequences representing phrases comprising two or more ideographic characters using said indices;

(d) prioritizing stroke or phonetic sequences that match an input sequence and prioritizing ideographic character sequences that match a stroke or phonetic sequence according to a linguistic model, wherein said model comprises a semantic model; and

(e) displaying one or more found stroke or phonetic sequences, and one or more phrases corresponding to said found stroke or phonetic sequences of ideographic characters.

2. (Cancelled)

3. (Previously Presented) The method of Claim 1, wherein said stroke input system is a five-stroke or an eight-stroke system.

4. (Previously Presented) The method of Claim 1, further comprising the step of:

displaying one or more of said matched ideographic character sequences.

5. (Original) The method of Claim 4, wherein said phonetic input system is a Pinyin system or a Zhuyin system.

6. (Cancelled)

7. (Cancelled)

8. (Currently Amended) The method of Claim 17, wherein said linguistic model comprises at least one of:

number of total keystrokes in an ideograph;

radical of an ideograph;

radical and number of strokes of a radical;

alphabetical order;

frequency of occurrence of ideographic character sequences, stroke sequences or phonetic sequences in formal, conversational written, or conversational spoken text;

frequency of occurrence of ideographic character sequences, stroke sequences or phonetic sequences when following a preceding character or characters;

grammar of the surrounding sentence;

application context of current input sequence entry; and

recency of use or repeated use of stroke, phonetic or ideographic character sequences by the user or within an application program.

9. (Original) The method of Claim 1, wherein said phonetic sequences comprise single syllables.

10. (Original) The method of Claim 1, wherein said phonetic sequences comprise single and multiple syllables.

11. (Original) The method of Claim 1, wherein said phonetic sequences comprise user generated sequences.

12. (Previously Presented) The method of Claim 11, wherein in absence of matching phonetic sequences in said input method specific database, a sequence of matching phonetic sequences is automatically generated based on multiple syllable phonetic sequences.

13. (Original) The method of Claim 12, wherein said sequence of matching phonetic sequences is narrowed down through user interaction.

14. (Original) The method of Claim 12, wherein a sequence of matching ideographic character sequences is automatically generated based on matching phonetic sequences to ideographic character sequences.

15. (Original) The method of Claim 14, wherein a sequence of matching ideographic character sequences is narrowed down through user interaction.

16. (Currently Amended) The method of Claim 17, further comprising the step of:

once an ideographic character sequence is selected, changing the associated priority of said matching phonetic sequence and sequence of ideographic characters.

17. (Original) The method of Claim 1, wherein the user can specify an explicit ideographic character separator.

18. (Original) The method of Claim 1, further comprising the step of:

when the user enters a sequence of phonetic characters, returning a sequence of phonetic sequences of exact matches and predictions that partially match.

19. (Original) The method of Claim 18, wherein said sequence of phonetic sequences is ordered according to a linguistic model.

20. (Previously Presented) The method of Claim 19, wherein said linguistic model comprises use of recency of use or repeated use of phonetic sequences by the user or within an application program.

21. (Original) The method of Claim 1, further comprising the step of:

once the user has selected a sequence of ideographic characters, presenting the user with a list of sequences of one or more ideographic characters.

22. (Original) The method of Claim 21, wherein said list of sequences is ordered according to a linguistic model.

23. (Original) The method of Claim 22, wherein said linguistic model comprises at least one of:

number of total keystrokes in an ideograph;

radical of an ideograph;

radical and number of strokes of radical;

alphabetical order;

frequency of occurrence of ideographic characters in formal or conversational written text;

frequency of occurrence of ideographic characters when following a preceding character or characters;

grammar of the surrounding sentence;

application context of current character entry; and

recency of use or repeated use of ideographic characters by the user or within an application program.

24. (Original) The method of Claim 1, wherein the user can enter partial syllables for each of the multiple syllable words.

25. (Previously Presented) The method of Claim 24, wherein the number of keystrokes for each partial syllable is one.

26. (Cancelled)

27. (Original) The method of Claim 1, wherein one of said plurality of inputs is associated with a special wildcard input that is associated with zero or one of said phonetic characters.

28. (Cancelled)

29. (Currently Amended) A system for receiving input sequences entered by a user and generating a phrase comprising one or more ideographic characters as an output, said system comprising:

a reduced keyboard input device having a plurality of input means, each of said input means being associated with at least one of a plurality of strokes and a plurality of phonetic characters, an input sequence being generated each time an

input means is selected by said user, wherein the generated input sequence has an interpretation that is ambiguous due to the plurality of strokes or phonetic characters associated with each input means;

an input method specific database containing at least one of a set of stroke sequences corresponding to input sequences and a set of phonetic sequences corresponding to input sequences;

~~an ideographic database associated with both stroke sequences and phonetic sequences,~~ said ideographic database containing all of:

a set of ideographic character sequences;

an ideographic index for each element of said set of ideographic character sequences;

a plurality of stroke indices corresponding to said set of stroke sequences; and

a plurality of phonetic indices corresponding to said set of phonetic sequence.

~~wherein phonetic sequences whose spellings correspond to said input sequence and a set of stroke sequences corresponding to the input sequence,~~ each sequence represents ~~representing~~ a phrase comprising two or more ideographic characters;

means for comparing an input sequence using said input method specific database and finding one or more stroke or phonetic sequences corresponding to the input sequence;

means for converting said found stroke or phonetic sequences to one or more corresponding sequences representing phrases comprising two or more ideographic characters using said ideographic database;

prioritizing stroke or phonetic sequences that match an input sequence and prioritizing ideographic character sequences that match a stroke or phonetic

sequence according to a linguistic model, said linguistic model further comprising use of grammar of the surrounding sentence; and

an output device for displaying one or more found stroke or phonetic sequences, and one or more phrases corresponding to said found stroke or phonetic sequences,

wherein said output device simultaneously displays all of: a text region displaying text entered by the user, a phonetic Pinyin spelling selection list, and a Chinese phrase selection list, wherein each phrase of said a Chinese phrase selection list comprises two or more ideographic characters.

30. (Cancelled)

31. (Original) The system of Claim 29, wherein said stroke input system is 5-stroke or 8-stroke system.

32. (Cancelled)

33. (Previously Presented) The system of Claim 29, wherein said phonetic input system is a Pinyin system or a Zhuyin system.

34. (Cancelled)

35. (Cancelled)

36. (Currently Amended) The system of Claim 29, wherein said linguistic model comprises use of application context of current input sequence entry.

37. (Previously Presented) The system of Claim 29, wherein said phonetic sequences comprise single syllables.

38. (Previously Presented) The system of Claim 29 wherein said phonetic sequences comprise both single and multiple syllables.

39. (Previously Presented) The system of Claim 29 wherein said phonetic sequences comprise user generated sequences.

40. (Previously Presented) The system of Claim 39, wherein in absence of matching phonetic sequences in said input method specific database, a sequence of matching phonetic sequences is automatically generated based on single and optionally multiple syllable phonetic sequences.

41. (Previously Presented) The system of Claim 40, wherein said sequence of matching phonetic sequences is narrowed down through user interaction.

42. (Previously Presented) The system of Claim 40, wherein a sequence of matching ideographic character sequences is automatically generated based on matching phonetic sequences to ideographic character sequences.

43. (Previously Presented) The system of Claim 42, wherein a sequence of matching ideographic character sequences is narrowed down through user interaction.

44. (Currently Amended) The system of Claim 2935, further comprising:

means for changing the associated priority of the matching phonetic sequence and the sequence of ideographic characters once an ideographic character sequence is selected.

45. (Previously Presented) The system of Claim 29, wherein the user can specify a particular tone for the phonetic syllable.

46. (Previously Presented) The system of Claim 29, wherein one of said plurality of inputs is associated with a special wildcard input that is associated with any or all tones.

47. (Previously Presented) The system of Claim 29, wherein the user can specify an explicit ideographic character separator.

48. (Previously Presented) The system of Claim 29, wherein once the user enters a sequence of phonetic characters, the user is returned a sequence of phonetic sequences of exact matches and predictions that partially match.

49. (Currently Amended) The system of Claim 48, wherein said sequence is ordered according to the frequency of use based on said a-linguistic model.

50. (Cancelled)

51. (Previously Presented) The system of Claim 29, wherein once the user has selected a sequence of ideographic characters, the user is presented with a list of sequences of one or more ideographic characters.

52. (Previously Presented) The system of Claim 51, wherein said list of sequences is ordered according to the frequency of use based on a linguistic model.

53. (Previously Presented) The system of Claim 52, where said linguistic model comprises at least one of:

- number of total keystrokes in an ideograph;
- radical of ideograph;
- radical and number of strokes of radical;
- alphabetical order;
- frequency of occurrence of ideographic characters in formal or conversational written text;
- frequency of occurrence of ideographic characters when following a preceding character or characters;
- grammar of the surrounding sentence;
- application context of current character entry; and
- recency of use or repeated use of ideographic characters by the user or within an application program.

54. (Previously Presented) The system of Claim 29, wherein one of said plurality of inputs is associated with a special wildcard input that is associated with zero or one of any of said strokes and said phonetic characters.

55. (Previously Presented) The system of Claim 29, wherein one of said plurality of inputs is associated with a special wildcard input that is associated with zero or one of said phonetic characters.

56. (Currently Amended) A computer usable medium containing instructions in computer readable form for carrying out a process for receiving input sequence entered by a user and generating a phrase comprising one or more ideographic characters as an output, said process comprising the steps of:

(a) entering an input sequence into a user input device, wherein said user input device comprises:

a reduced keyboard input device having a plurality of input means, each of said input means being associated with at least one of a plurality of strokes and a plurality of phonetic characters, and an input sequence being generated each time an input means is selected by a user, wherein the generated input sequence has an interpretation that is ambiguous due to the plurality of strokes or phonetic characters associated with each input means;

an input method specific database containing, at least one of a set of phonetic sequences corresponding to input sequences and a set of phonetic sequences corresponding to input sequences; and

~~an ideographic database associated with both phonetic sequences and stroke sequences,~~ said ideographic database containing all of:

a set of ideographic character sequences;

an ideographic index for each element of said set of ideographic character sequences;

a plurality of stroke indices corresponding to said set of stroke sequences; and

a plurality of phonetic indices corresponding to said set of phonetic sequence, ~~phonetic sequences whose spellings correspond to said input sequence and a set of stroke sequences corresponding to the input sequence, ideographic characters~~

wherein each sequence represents ~~representing~~ a phrase comprising two or more ideographic characters;

(b) comparing an input sequence using said input method specific database and finding one or more stroke or phonetic sequences corresponding to the input sequence;

(c) converting said found stroke or phonetic sequences to one or more corresponding sequences representing phrases comprising two or more ideographic characters using said ideographic database; and

(d) prioritizing stroke or phonetic sequences that match an input sequence and prioritizing ideographic character sequences that match a stroke or phonetic sequence according to a linguistic model, said linguistic model extended to contain phrases not contained in said ideographic database; and

(e) displaying one or more said matched stroke or phonetic sequences and one or more phrases corresponding to said found stroke or phonetic sequences, wherein said step of displaying simultaneously displays all of: a text region displaying text entered by the user, a phonetic Pinyin spelling selection list, and a Chinese phrase selection list,

wherein each phrase of said Chinese phrase selection list comprises two or more ideographic characters.

57. (Cancelled)

58. (Previously Presented) The medium of Claim 57, wherein said stroke input system is a five-stroke or an eight-stroke system.

59. (Cancelled)

60. (Previously Presented) The medium of Claim 56, wherein said phonetic input system is a Pinyin system or a Zhuyin system.

61. (Cancelled)

62. (Cancelled)

63. (Currently Amended) The medium of Claim 5662, wherein said linguistic model comprises at least one of:

number of total keystrokes in an ideograph;

radical of an ideograph;

radical and number of strokes of a radical;

alphabetical order;

frequency of occurrence of ideographic character sequences, stroke sequences or phonetic sequences in formal, conversational written, or conversational spoken text;

frequency of occurrence of ideographic character sequences, stroke sequences or phonetic sequences when following a preceding character or characters;

grammar of the surrounding sentence;

application context of current input sequence entry; and

recency of use or repeated use of stroke, phonetic or ideographic character sequences by the user or within an application program.

64. (Previously Presented) The medium of Claim 56, wherein said phonetic sequences comprise single syllables.

65. (Previously Presented) The medium of Claim 56, wherein said phonetic sequences comprise single and multiple syllables.

66. (Previously Presented) The medium of Claim 56, wherein said phonetic sequences comprise user generated sequences.

67. (Previously Presented) The medium of Claim 66, wherein in absence of matching phonetic sequences in said input method specific database, a sequence of matching phonetic sequences is automatically generated based on single and optionally multiple syllable phonetic sequences.

68. (Previously Presented) The medium of Claim 67, wherein said sequence of matching phonetic sequences is narrowed down through user interaction.

69. (Previously Presented) The medium of Claim 67, wherein a sequence of matching ideographic character sequences is automatically generated based on matching phonetic sequences to ideographic character sequences.

70. (Previously Presented) The medium of Claim 69, wherein a sequence of matching ideographic character sequences is narrowed down through user interaction.

71. (Currently Amended) The medium of Claim 5662, wherein the process further comprises the step of:

once an ideographic character sequence is selected, changing the associated priority of said matching phonetic sequence and sequence of ideographic characters.

72. (Previously Presented) The medium of Claim 56, wherein the user can specify an explicit ideographic character separator.

73. (Previously Presented) The medium of Claim 56, wherein the process further comprises the step of:

when the user enters a sequence of phonetic characters, returning a sequence of phonetic sequences of exact matches and predictions that partially match.

74. (Previously Presented) The medium of Claim 73, wherein said sequence of phonetic sequences is ordered according to a linguistic model.

75. (Previously Presented) The medium of Claim 74, wherein said linguistic model comprises at least one of:

number of total keystrokes in an ideograph;

radical of an ideograph;

radical and number of strokes of radical;

alphabetical order;

frequency of occurrence of phonetic sequences or ideographic character sequences in formal or conversational written text;

frequency of occurrence of phonetic sequences or ideographic when following a preceding character or characters;

grammar of the surrounding sentence;

application context of current character sequence entry; and

recency of use or repeated use of phonetic sequences by the user or within an application program.

76. (Previously Presented) The medium of Claim 56, wherein the process further comprises the step of:

once the user has selected a sequence of ideographic characters, presenting the user with a list of sequences of one or more ideographic characters.

77. (Previously Presented) The medium of Claim 76, wherein said list of sequences is ordered according to a linguistic model.

78. (Previously Presented) The medium of Claim 77, wherein said linguistic model comprises at least one of:

number of total keystrokes in an ideograph;

radical of an ideograph;

radical and number of strokes of radical;

alphabetical order;

frequency of occurrence of ideographic characters in formal or conversational written text;

frequency of occurrence of ideographic characters when following a preceding character or characters;

grammar of the surrounding sentence;

application context of current character entry; and

recency of use or repeated use of ideographic characters by the user or within an application program.

79. (Previously Presented) The medium of Claim 56, wherein the user can enter partial syllables for each of the multiple syllable words.

80. (Previously Presented) The medium of Claim 79, wherein the number of keystrokes for each partial syllable is one.

81. (Previously Presented) The medium of Claim 56, wherein one of said plurality of inputs is associated with a special wildcard input that is associated with zero or one of any of said strokes and said phonetic characters.

82. (Cancelled)

83. (Previously Presented) The method of Claim 1, wherein said step of comparing uses said matching to determine whether said input sequence corresponds to said set of stroke sequences or said set of phonetic sequences.

84. (Previously Presented) The method of Claim 1, wherein said input sequence corresponds to a partial Pinyin spelling, wherein prior to said input sequence completing a first Chinese character, said step of displaying displays a corresponding Chinese phrase having two or more Chinese characters.

85. (Currently Amended) The method of Claim 1, wherein both said set of phonetic sequences and said set of stroke sequence in said input method specific database comprise spellings associated with regional accents, said method further comprising the steps of:

providing the user with spelling variations based on both said input sequence and confusion sets; and

providing an option for the user to turn off a particular confusion set of said confusion sets.

86. (Currently Amended) The method of Claim 1, further comprising a linguistic model, wherein said linguistic model causes said step of displaying to display a predicted word before the user types any characters prior entry of any of said input sequence for said predicted word.

87. (Previously Presented) The method of Claim 1, further comprising a linguistic model, wherein said linguistic model selects full spelling of a word from said input method specific database based upon said input sequence representing only the first character of each syllable of said word, wherein said each syllable contains multiple characters.